REMARKS

Applicant wishes to thank the Examiner for the prior courteous telephone discussions with the undersigned Counsel regarding the submitted documents and the form of claim amendments. All submitted documents have now been made "of record", except for the "Irioden LS....." publication, which had apparently been lost at the PTO. Applicant submitted a further copy "Irioden LS....." on October 20, 2004, and also faxed a copy to the Examiner. Accordingly, that publication should now be "of record", and Applicant requests acknowledgement of same.

The claims have been re-presented in the form suggested by the Examiner. Specifically, dependent claim 1 has been cancelled, and is now new dependent claim 62. Claim 12 has been cancelled. Dependent claims 22-25 and 28 have been cancelled and replaced by new claims 63-67, respectively. Accordingly, claims 1-8, 10, 13-21, 26, 27, 29, 30, and 62-67 are in the Application.

Independent claim 10, and all the dependent claims that were examined, stand rejected as being anticipated by Muellich U.S. Patent 5,893,959, except dependent claims 26 and 30, which stand rejected as being obvious over Muellich in view of Osborne U.S. Patent 4,069,080. Applicant respectfully traverses these rejections and requests reconsideration.

Independent claim 10 recites a method of forming a weld between plastics workpieces over a joint region, comprising: exposing the joint

region to incident radiation having a wavelength outside the visible range so as to cause melting of the surface of one or both workpieces at the joint region, and allowing the melted material to cool thereby welding the workpieces together, the method further comprising providing a radiation absorbing material at the joint region in one of the workpieces or between the workpieces which has an absorption band in the range 780 nm – 1500 nm matched to the wavelength of the incident radiation so as to absorb the incident radiation and generate heat for the melting process, wherein the radiation absorbing material is visually transmissive so that the material does not substantially affect the appearance of the joint or the workpieces in visible light.

The primary citation, Muellich, teaches neither the underlying concept of the claimed invention nor the steps set forth. Muellich relates to the laser welding of plastics and arranges for one plastic workpiece to be substantially transparent to the incident radiation while the other is absorbent. In addition, however, the Muellich disclosure emphasizes the importance of providing additives to ensure that the reflectivity of the two workpieces is substantially identical for visible light rays and tha the parts are substantially opaque to visible light (see claim 1, column 9, lines16-21 of the citation). The Muellich specification goes on to indicate that this can be achieved by using black dye pigments (column 7, lines 27-44).

It is clear from Muellich that, in complete contrast to the present invention, the additives are used to affect the visual appearance of the workpieces so that they match each other visually but differ in their absorbance capabilities, thus enabling transmission laser welding. Claim

10 of the present application, on the other hand, specifically states that the radiation absorbing material is visually transmissive so as not substantially to affect the appearance of the joint region in visible light.

A further important requirement of claim 1 is that the absorption band is not only in the range 780-1500 nm but is matched to the wavelength of the incident radiation. Matching means that the material absorbs preferentially at the wavelength of the incident radiation compared with visible wavelengths. This is supported for example, by the passages on page 3, lines 8-9; page 3, lines 10-19; and page 3, lines 29-31 of Applicant's specification.

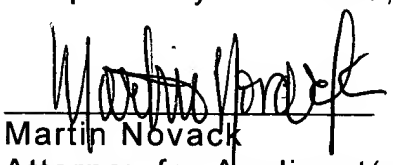
There is no disclosure in the Muellich citation of selecting a radiation absorbing material having an absorption band that is matched to the wavelength of the incident radiation. The only specific examples of absorbing additives disclosed in Muellich are black dye pigments such as carbon black (column 2, line 4) and this has a flat absorption property over a wide range of wavelengths including visible. Thus, no matching is taught or suggested in the citation.

The teachings missing from the primary citation, Muellich, are not provided by the secondary citation, Osborne, which was applied only against some of the dependent claims.

In view of the foregoing it is believed that all claims of this application are now in condition for allowance, and such favorable action is respectfully solicited. In the event there are any remaining issues, however, it is asked that the Examiner kindly telephone the undersigned

counsel collect so that they can be resolved.

Respectfully submitted,



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